

experiencing increasing winds and falling pressure. On the 28th the storm was moving northward with increased energy, and at noon the American S. S. *West Ivan*, while in latitude  $37^{\circ} 11' N.$ , longitude  $143^{\circ} 23' W.$ , observed the lowest pressure reported, 28.97 inches, the wind shortly thereafter increasing to force 10, from the west. During the 28th this cyclone seems to have decreased in energy with northward movement, although westerly winds, force 9, occurred near latitude  $37^{\circ} N.$ , between longitudes  $141^{\circ}$  and  $145^{\circ} W.$ , during the morning hours. On the two following days what remained of the storm lay off the coasts of Washington and British Columbia, and from it an offshoot depression entered the continent.

Off the coasts of Mexico and Central America generally fine weather prevailed. At least one depression formed in this region, however, and that on the afternoon of the 19th and the morning of the 20th. The American tanker *A. C. Bedford*, while in latitude  $14^{\circ} 35' N.$ , longitude  $95^{\circ} 50' W.$ , on the 19th, experienced a northeasterly gale, highest force 9. Early on the 20th the American S. S. *American*, southward bound, experienced a similar gale in  $14^{\circ} 30' N.$ ,  $96^{\circ} 28' W.$ , lowest pressure 29.86 inches. At 9 a. m. of this date the *American* sighted a "large waterspout without visible movement" in  $15^{\circ} 36' N.$ ,  $98^{\circ} 20' W.$

Over the northern area, that is, within the region embraced by the Gulf of Alaska and the Aleutians, considerable storm activity occurred during the month. The Aleutian LOW showed somewhat the customary double-center formation with more or less shifting along the parallels, but the westernmost center was the stronger and more persistent. Individual offshoots from the LOW in the Alaskan region entered the Canadian Northwest on the 3d, 6th, 10th, 15th, 18th, 21st, 23d, and 27th of the month.

The North Pacific HIGH was well-developed during most of March, and was seriously disturbed only by the storm which began in the Hawaiian region on the 26th.

Pressure was below normal by small amounts over the eastern part of the ocean, as shown by observations at the island stations, the greatest deficiency being in the region of the Hawaiian Islands. The average pressure at Dutch Harbor, based on p. m. reports, was 29.73 inches, 0.04 inch below normal. The highest pressure, 30.34 inches, occurred on the 11th; the lowest, 28.74, on the 8th. Absolute range 1.60 inches. At Honolulu the average p. m. pressure was 29.97 inches, or 0.07 inch below normal. The highest pressure, 30.15 inches, occurred on the 9th; the lowest, 29.76, on the 26th. At Midway Island the average p. m. pressure was 30.09, or 0.01 inch below normal. The highest pressure, 30.36 inches, occurred on the 11th; the lowest, 29.78, on the 29th and 30th.

On the 26th and 27th two vessels, the American S. S. *West Keats* and the Japanese S. S. *Boston Maru*, reported ice floes between latitudes  $43^{\circ}$  and  $44^{\circ} N.$ , longitudes  $145^{\circ} 47'$  and  $148^{\circ} 42' E.$  The fields were often several miles apart, and the ice 3 to 5 feet in thickness.

More fog occurred in March than during any of the preceding three months, and it was more generally widespread along the northern and middle latitudes. There was scarcely a day in which it was not reported from some portion of the North Pacific area. In the South Pacific fog was noted on the 23d and 24th from the 7th parallel southward for some distance along the coast of Peru.

## SOUTH PACIFIC CYCLONE OF FEBRUARY-MARCH, 1923.

By WILLIS E. HURD.

The American S. S. *Vinita*, Captain Holsen, observer Chas. H. McKean, while on a voyage from Honolulu toward Auckland, New Zealand, encountered rough weather during the last of February and the 1st of March (Greenwich dates) while near latitude  $30^{\circ} S.$ , and the 180th meridian. On February 27 the vessel received radio warning from Wellington, New Zealand, of a storm central north of Cape Maria and an ocean forecast of east to northeast gales. On the morning of the 28th, while the *Vinita* was in latitude  $28^{\circ} 59' S.$ , longitude  $179^{\circ} 30' E.$  the weather became squally and pressure began falling rapidly. By 2 p. m. the seas were mountainous, with wind from the north, force 8-9, pressure 29.25 inches. At 8 p. m. the sky partly cleared and the weather moderated, with the glass at its lowest, 29.12 inches, in D. R. latitude  $30^{\circ} 20' S.$ , longitude  $178^{\circ} 05' E.$  At 11.15 p. m. the vessel hove to in a southerly wind, buffeted about by cross changing to southerly seas. Shortly after midnight the wind went into the southeast, force 9, and remained in this quarter during the forenoon of March 1, gradually moderating, with rising pressure, so that the vessel was able to resume her course by 9 a. m.

## NOTES ON WEATHER IN OTHER PARTS OF THE WORLD.

*Newfoundland.*—ST. JOHNS, March 15.—The sealing fleet, which sailed from this port for the Grand Banks a week ago is jammed in an immense ice field off the coast of Newfoundland.—*New York Tribune*, March 16, 1923.

ST. JOHNS, March 31.—Service on the Newfoundland Railway suspended because of the blizzard [Mar. 29] has not been resumed as yet. Off the coast the storm is still raging. Many vessels remain frozen in the ice fields, and the sealing fleet reported by radio to-day that it was unable to move owing to the ice pack.—*New York Tribune*, March 31, 1923.

*British Isles.*—Unusually high day temperatures were registered about the 27th. At Kew Observatory, Richmond, a maximum of  $68^{\circ} F.$  occurred on that date. Such a temperature has only once before been recorded there in March during the past 50 years. \* \* \*

The rainfall of the month was above the average in parts of the south of the British Isles but less than half the average fall in the northern half of Scotland.<sup>1</sup>

*France.*—Early in the month stormy weather with much rain and violent thunderstorms occurred in France, and heavy floods were reported on the Seine, parts of Paris being flooded, and on many other rivers from the 1st to about the 8th. There was some loss of life.<sup>1</sup>

*Asia Minor.*—On the 23d, the Tigris was reported as rising to an unprecedented height in consequence of heavy rains and the melting of snow in Kurdistan; a day or two later it burst its banks, flooding 300 square miles of desert and isolating Baghdad.<sup>1</sup>

*Africa.*—Heavy rains in Nyasaland in the middle of March did great damage to the tobacco crop, and caused destructive floods on the Zambesi on the 19th and 20th, which interrupted railway communications. On the 26th the floods were subsiding.<sup>1</sup>

<sup>1</sup> *Meteorological Magazine*, April 1923, pp. 68-69.